PROCESS FOR INCREASING THE EFFICIENCY OF A COMPUTER IN FINITE ELEMENT SIMULATIONS AND A COMPUTER FOR PERFORMING THAT PROCESS

Abstract

The invention relates to a process for increasing the efficiency of a computer system in finite element simulations by efficient automatic construction of suitable basis functions for computing approximate solutions and one such computer system. In the process as claimed in the invention, a grid covering the simulation region is generated. B-splines defined thereon with supports, which intersect the simulation region, are classified into inner and outer B-splines (5). Then, coupling coefficients for forming linear combinations of inner and outer B-splines are determined (6), and the parameters which determine the resulting basis functions, are stored and output.